Abstract of the Disclosure

A method and apparatus to separate first and second mixture signals received from two sensors and transformed into the frequency domain in two or more source signals. The signal separation method includes: calculating a global signal absence probability for each frame and a local signal absence probability for each frequency band of a corresponding frame for at least one of the first and second mixture signals; estimating a spectrum vector for each frequency band in which a noise signal is eliminated using the global signal absence probability; determining a plurality of frequency bands including at least one of a noise signal and a source signal using the local signal absence probability, and generating a source label vector which consists of a plurality of frequency bands assigned to each source, using an attenuation parameter and a delay parameter generated for each of the determined frequency bands; and multiplying the spectrum vector estimated for each frequency band by the source label vector, and obtaining signals separated according to the source signals.